

A

$$-180 = -576 \cos(A)$$

$$0.313 = \cos(A)$$

$$\cos^{-1}(0.313) = A$$

$$A = 71.6$$

4.

$$P = \sqrt{\frac{xy}{T}} + 3 \quad / = \quad P^2 = \frac{xy}{T} + 3 \quad / = \quad P^2 - 3 = \frac{xy}{T} \quad / = \quad T(P^2 - 3) = xy \quad /$$

$$= \frac{T(P^2 - 3)}{y} = x$$

$$5. (i) \quad 5^{x+2} = 2^x \quad 3 \text{ d.p.}$$

$$\log 5^{x+2} = \log 2^x$$

2nd law 3rd law

$$(x+2) \log 5 = (x) \log 2$$

$$(x+2) 0.699 = (x) 0.301$$

$$0.699x + 1.398 = 0.301x$$

$$(ii) \quad \log(x+2) + \log(x+3) = 2 \log(x+1)$$

$$\log(x+2) + \log(x+3) = 2 \log(x+1)$$

1st law 3rd law

$$\log(x+2)(x+3) = \log(x+1)^2$$

$$(x+2)(x+3) = (x+1)(x+1)$$

$$x^2 + 5x + 6 = x^2 + 2x + 1$$

$$\underline{5x} \quad \underline{2x}$$